

MISCELLANEA ENTOMOLOGICA, No. V.

“THE HELÆIDES.”

BY WILLIAM MACLEAY, F.L.S., &c.

(Continued from page 550.)

In my last Paper on this subject, I gave descriptions of all the known species of the winged genera of the sub-family. In the following I shall deal with the apterous genera of the same sub-family.

These consist of the genera *Helceus*, *Sympetes* and *Saragus*. I shall take them in the order in which I have now placed them.

Genus HELÆUS, Latr.

Head entirely immersed in the thorax, scarcely narrowed, truncate in front, depressed on the forehead. Eyes of variable size. Antennæ in general as long as, or a little more long than the thorax, their four last joints sub-globose, perfoliate, and forming a tolerably distinct mass. Thorax moderately transversal, parabolically rounded on the sides, narrowly and profoundly emarginate in front with the anterior angles prolonged and crossing in front of the head; the base imperfectly contiguous to the elytra, bisinuate, with a large median lobe of variable form; the foliaceous margin of great breadth and reflected. Elytra oblong-oval or oval, convex on the disk, the foliaceous margins of variable breadth and reflected. Legs long, tibiæ finely rough, one spur to the anterior and two to the four posterior tibiæ, sometimes very small. Metasternum very short, mesosternum declivous, broadly concave, prosternal prominence curved behind, sometimes prolonged into a short point. Body apterous.

This genus, which gives its name to the sub-family, contains in itself in the most exaggerated degree all the peculiarities of the group. The thorax enclosing the head ; the broad, flattened form, and the large expanded upturned margins, are very largely more conspicuous in the species of this genus than in any of the others. The greater number of the species are from South Australia, the Swan River settlement, and the interior. I think it may be classed generally as an inhabitant of the dry and barren plains of the far interior.

I propose to group the species into those with—

1. The elytra smooth or only granulate.
2. „ „ pilose.
3. „ „ bicostate.
4. „ „ tuberculate.

1. ELYTRA SMOOTH OR ONLY GRANULATE.

61. *HELÆUS COLOSSUS*, De Brême.

Mon. Cossyph. I. p. 59, pl. IV. fig. 1.

Broadly ovate, brownish black, sub-opaque, glabrous. Head finely rugose, labrum exserted, a little emarginate, clypeus depressed, rounded laterally, and broadly emarginate at the apex. Antennæ brown, a little longer than the thorax ; the last four joints large, round and reddish, the terminal one a little elongated. Thorax rounded, strongly sinuate posteriorly, scarcely visibly rugose ; the disk convex, uneven, on the base of the median line a strong erect spine, not touching the basal margin of the thorax ; the lateral margins very broad, finely rugose-punctate, and turned up on the borders ; the anterior angles very rounded and strongly crossing one another, the posterior angles curved backwards. Elytra oval and rounded behind, with a scattered minute granulation, the disk oval, sub-convex and a little prolonged towards the apex ; the margins broad like those of the thorax, feebly raised and reflected on the borders : body beneath of a reddish-brown and punctate ; the tibiæ rough.

Long. 16 lines, lat. $10\frac{1}{4}$ lines.

Hab.—Queensland (?).

If I am correct in my identification of this insect, its habitat is Queensland; I have specimens of what I take to be it, from Rockhampton and Victoria River (Mitchell's Exp.).

62. HELEUS INTERMEDIUS, De Brême.

Mon. Cossyph. I. p. 61, pl. V. fig. 1.

Broadly ovate, black, nitid, glabrous. Head slightly rugose, elongate, square in front, the clypeus convex and a little emarginate in front, as well as the labrum. Antennæ as in *H. Colossus*. Thorax somewhat granulose, transverse and a little sinuate behind, the sides rounded towards the base, and conspicuously narrowed and emarginate in front; the disk is very slightly convex and presents many depressions and inequalities, on the base of the median line a strong erect spine a little curved backwards; the margins broad particularly laterally, turned up on the edge, the posterior angles recurved, the anterior rounded and crossing. Elytra oval, nitid, with a scarcely visible scattered granulation, the disk oval, convex, a little prolonged backwards, the suture raised into a strong carina; on each elytron near the scutellum a very slightly prominent and oblique costa not even reaching to the first third of the elytra. The margins as large at the base as that of the thorax, and rather narrower towards the apex. Body beneath of a deep brown and punctate; tibiæ rough.

Long. 13 lines, lat. 8 lines,

Hab.—South Australia.

63. HELEUS PRINCEPS, Hope.

Trans. Ent. Soc. Lond. 1848, Vol. V. p. 52, pl. VI. fig. 1.

“Fuscus, disco in medio nigricante, marginibus pallidioribus seu rubro-fuscis, pedibusque concoloribus. Thorax antrorsum rotundatus (angulis anterioribus complicatis); foramen antice

latius quam longius, postice tuberculo elevato nigricanti, foramine utrinque satis conspicuo. Elytra late ovalia, postice rotundata, medio disci atriori, suturaque elevata, sexque punctatis lineis elevatis in singulo apparentibus, marginibus late piceo-fulvis, punctisque atris elevatis sparsim aspersis. Corpus infra fusco-brunneum. Pedes concolores."

Long. $15\frac{1}{2}$ lines, lat. $9\frac{3}{4}$ lines.

Hab.—Swan River.

I have given Mr. Hope's description in full, not that I regard it as by any means a satisfactory description, but because I may be wrong in giving Mr. Hope's name to the insect described below, but which I think must be identical with it.

Very broadly ovate, black, sub-opaque. Head very minutely punctate, eyes very transverse, approximate. Clypeus very broadly and lightly emarginate. Thorax transverse, very broadly margined, the margins reddish, largely hollowed out and reflected, and minutely rugose punctate, the anterior angles very broadly rounded and crossing one another in front of the head, the right one uppermost; the disk small, convex, uneven, with the median line rising in a short carina near the apex and into a large conical headed tubercle near the base.

Elytra as broad or slightly broader than the thorax at the base, the margins very broad, flattened out and much reflected on the borders, reddish and diaphanous with some strong scattered punctures, the disk convex, carinate on the suture, irregularly and somewhat obliterated rugosely punctate, with on each elytron six rows of more or less distant small granules, the row next the suture most closely continuous. Body beneath and legs opaque brown and densely punctate.

Long. 14 lines, lat. 9 lines.

Hab.—South Australia.

64. *HELÆUS BROWNII*, Kirby.

Trans. Linn. Soc. Lond. Vol. XII. p. 467, pl. XXIII. fig. 8—*Brême*, Mon. Cossyph. I. p. 82, pl. VI. fig. 6.—*Boisd.* Voy. de l'Astrol. p. 261.

Ovate, black, or brownish black, very nitid, glabrous. Head granulate, clypeus convex, turned up on the border, emarginate anteriorly, the labrum salient not emarginate, forehead elevated with a slight longitudinal groove between the eyes; the eighth joint of the antennæ large and round, the ninth and tenth not so swollen, the last oval and reddish. Thorax transverse, rounded, smooth and not much sinuated posteriorly; the disk feebly carinated, moderately convex, with several depressions and irregularities, and a small erect spine at the base of the median line; the anterior angles crossing and rounded, the posterior very much curved backwards; the margins broad, raised, very minutely punctate, and folded back at the borders. Elytra oval, the disk convex and scarcely visibly granulate, the suture carinate; on each side of the scutellum a short slight depression or fovea, the margins raised and folded on the border, as broad as those of the thorax towards the base, narrower on the sides and apex and convex at the humeral angles, which are a little prominent. Under surface and legs brown; tibiæ rugose.

Long. 10 lines, lat. $8\frac{1}{2}$ lines.

Hab.—Swan River, W. Australia.

65. *HELÆUS INTERIORIS*, n. sp.

Oblong-oval, black, sub-opaque. Head very minutely punctate, the clypeus and labrum slightly emarginate. Thorax minutely and roughly punctate, the margins very broad and much reflected, the anterior angles broadly rounded and crossing in front of the head leaving the opening over the head nearly circular, the posterior angles much recurved backwards; the disk is small, slightly convex and uneven, with a strong, erect, conical tubercle in the middle near the base. Elytra at the base about the width

of the thorax at the base, but expanding behind, the margins very broad, a little reflexed, and rather thinly granulate, the disk carinate at the suture, and on each elytron about eleven or twelve irregular rows of more or less distant granules, the second row from the suture having the granules more continuous, and presenting near the base a costiform appearance.

Long. 12 lines, lat. 8 lines.

Hab.—Darling River.

66. *HELÆUS PALLIDUS*, n. sp.

The very pale yellowish-brown diaphanous appearance of this insect may possibly be due to its being very fresh from the chrysalis, but, quite apart from its colour, it is undoubtedly a very distinct species. In form it is not unlike *H. intermedius*. Head rather flat, punctate, canaliculate between the eyes, these approximate. Thorax transverse, very broadly margined, the margins very minutely punctate, much flattened out, and a little recurved on the edges; the disk is small, convex, and of a darker colour than the margins, uneven and foveated, with an erect rather subacute spine near the middle of the base; the anterior angles are largely rounded in front of the head, the posterior are strongly pointed backwards. The elytra are a very little broader than the thorax, and scarcely amplified behind the shoulders, the margins like those of the thorax, the disk convex, carinate on the suture and rather densely covered with punctures very irregularly disposed. Body beneath and legs brown, finely striolate-punctate.

Long. 12 lines, lat 8 lines.

Hab.—South Australia.

The only other species resembling this are—*H. princeps*, *H. intermedius*, and *H. Colossus*.

The first of these has the elytra with distinct rows of granules; the second has the elytra smooth, with very small scattered granules; the last has minute granules on the disk of the elytra, and large scattered punctures on the margins; whereas the present species has the disk of the elytra closely and irregularly punctured without trace of granules.

2. ELYTRA PILOSE.

67. *HELÆUS PERFORATUS*, Latreille.

Fam. Naturelle, 2nd Ed. Vol. II. p. 32, pl. III. fig. 6—Guérin et Perch. Gen. des Ins. 3 liv. N. 7, pl. XI.—Boisd. Voy. de l'Astrol. p. 361.—De Brême, Mon. Cossyph. I. p. 55, pl. VI. fig. 2.

Broadly ovate, black, sometimes a little violet black. Head advanced, subrugose, a little longer than broad, clypeus convex, the angle of the epicranium raised, the forehead canaliculate between the eyes; labrum salient, as well as the palpi. Antennæ about $1\frac{1}{2}$ times the length of the thorax, the seventh joint slightly rounded, the two following globular, the last joint larger and pointed. Thorax transverse, sub-sinuated posteriorly, rounded on the sides and narrowed in front, the disk a little punctate, slightly convex, not perceptibly carinate, but with a perceptible tubercle on the median line towards the base, the margins very dilated, thin, recurved and very minutely granulate, the anterior angles dilated, rounded and meeting or slightly crossing in front of the head, the posterior angles pointing a little backwards. Elytra oval, a little dilated behind the humeral angles, rounded towards the apex, the disk very convex, oval, nitid, irregularly punctate, each elytron with four rows of long crisp hairs, these hairs are generally black, but sometimes reddish at the point, and planted in bundles; the margins are very dilated, a little larger than those of the thorax. The under surface entirely black and punctate. Legs black, tibiæ rugose.

Long. $13\frac{1}{2}$ lines, lat. $8\frac{1}{2}$ lines.

Hab.—South and Western Australia.

68. *HELÆUS KIRBYI*, Brême.

Mon. Cossyph. I. p. 57, pl. VI. fig. 4.

Very like *H. perforatus* but of a grayer black and a little less dull. Thorax more narrowed on each side and more strongly carinate, particularly towards the base where the median line is

elevated into an obtuse point, posterior angles salient and recurved backwards. Elytra dilated behind the humeral angles, narrowing a little towards the middle and apex, the disk very convex, oval, nitid, irregularly punctate, with on each elytron four rows of small tufts of reddish-brown hair, much thinner and shorter than in *H. perforatus* and with scarcely a trace of puncturation on the margins. In all else like *H. perforatus*.

Long. $12\frac{1}{2}$ lines, lat. 8 lines.

Hab.—Swan River.

69. HELEUS SPENCII, Brême.

Mon. Cossyph. I, p. 58, pl. VI. fig. 5.

Like the last two species. Entirely of a nitid blackish brown, with some fulvous reflections. Head as in *H. perforatus*, but a little longer. Antennæ of the same form but shorter and velvety. Thorax narrower relatively to the size than that of *H. perforatus* and carinated in the same way, not visibly punctate, slightly sinuate behind, the posterior angles very little recurved behind; the margins as in *H. perforatus*. Elytra dilated and rounded posteriorly, of the width of the thorax at the base, the humeral angles rounded, the disk convex, elongate oval, nitid, irregularly punctate, with on each elytron four rows of very fine fulvous hairs exceedingly short and forming a compact brush; the margins as in the preceding species, scarcely perceptibly punctate, more narrow towards the apex than on the sides. Under surface and legs as in *H. perforatus*.

Long. $12\frac{1}{2}$ lines, lat. 7 lines.

Hab.—New Holland.

3. ELYTRA COSTATE.

70. HELÆUS MONILIFERUS, Pascoe.

Journ. of Ent. II. p. 463.

Broadly ovate, deep brown or black, sub-nitid. Head rugose, clypeus and labrum truncate, forehead lightly canaliculate, the

eyes approximate. Thorax transverse, the margins very broad and dilated, very minutely rugosely punctate, opaque; the anterior angles crossing in front of the head and rounded at the apex, but much less broadly rounded than in those of *H. Colossus*, the posterior angles not much recurved; the disk is convex, smooth, not perceptibly punctate, and strongly carinate on the median line from a little behind the apex to close to the base, the carina rising in a compressed tubercle at its base; the base of the thorax is bisinuate, the edge near each side minutely serrate. The elytra are very slightly broader than the thorax and nitid, the margins are broad, smooth, impunctate and of a reddish hue with a very thick upturned border, the disk is faintly punctate, with the suture slightly carinate; a very strong carina on each elytron near the suture extending from base to apex, and a line of rather large bead-like tubercles along each side on the marginal junction. Under surface brown, very finely striolate, legs punctate, finely pubescent.

Long. 12 lines, lat. 7 lines.

Hab.—South Australia.

71. HELÆUS MACLEAYI, Brême.

Mon. Cossyph. I. p. 65, pl. VI. fig. 3.

Entirely of a very nitid brownish-black, smooth. Head somewhat square; clypeus not sensibly emarginate, labrum salient feebly rounded, epicranium convex, forehead very slightly canaliculate between the eyes. Antennæ as long as the thorax, in all respects like that of *H. perforatus*. Thorax finely punctate, less transverse than in the previous species, elongated anteriorly and rounded laterally, subsinuate behind, a very slight emargination on each side a little above the posterior angles, the anterior angles very long, crossing in front of the head and terminating in an obtuse point; the disk a little convex, the median line carinate, more elevated behind; margins broad, wavy, feebly folded on the border. Elytra with a slight irregular puncturation, a little dilated behind the humeral angles, then almost parallel-sided to two-thirds of the length and rounded at the apex, the disk very

convex, nitid, feebly crimped on each side towards the middle of the body and at the margin, a very prominent sutural carina, on each elytron near the suture a short raised carina extending from the base to two-thirds of their length; the margins as broad as that of the prothorax, more narrow behind, irregularly wavy, and folded above on the border. The undersurface is of a very nitid brown and punctate.

Long. $8\frac{1}{2}$ lines, lat. $4\frac{1}{2}$ lines.

Hab.—King George's Sound.

72. *HELÆUS MASTERSI*, Pascoe.

Ann. Nat. Hist. Ser. 4 Vol. V. p. 99.

“Broadly obovate, dark brown, covered with a loose greyish dust-like squamosity, and furnished above with short erect black bristles; eyes approximate, nearly covered by the prothorax; the latter impunctate, nearly semi-circular, not narrowed at the base, the margin broad, slightly concave, the centre with a narrow very distinct longitudinal ridgenot quite extending to the base; scutellum transverse; elytra as broad at the base as long, broadest behind the middle, sides of the disk very convex, the margins moderately foliaceous, irregularly punctured; the intervals of the punctures with short bristles, the suture finely raised, and at a short distance on each of it a strong carina not reaching to the apex, another, but nearly obsolete, at the same distance on the outer side; body beneath and legs dull brown, the latter especially covered with short hairs” (Pascoe).

Length, $6\frac{1}{2}$ - $7\frac{1}{2}$ lines.

Hab.—Salt River, West Australia.

73. *HELÆUS PERONII*, Boisd.

Voy. de l'Astrol. p. 259.—Brême, Mon. Cossyph. I. p. 66, pl. V. fig. 3.

Oval, deep brownish-black, glabrous. Head finely rugose, nearly square, clypeus convex and slightly emarginate in front, its angles

obtuse, epicranium raised. Antennæ a little longer than the thorax, brown, terminating in a mass formed of the last five joints, the ninth largest, the last oval. Thorax transverse, rounded laterally, narrowed towards the apex and sinuate at the base, entirely rugose and opaque, the disk convex, the median line strongly carinate, the carina more elevated towards the base, near which it terminates in an obtuse point; the margins rather concave and reflexed on the borders, a little convex at the posterior angles which are lightly curved backwards, the anterior angles crossing a little and terminating in a narrow point. Elytra oval, rounded towards the apex, nitid, the disk convex, strongly punctate, suture carinate, on each elytron and nearer the suture than the sides, an elevated thin carina which terminates about one-third of the length from the apex; scutellum rounded, margins smooth, raised at the humeral angles, the rest flat, narrower at the base than that of the thorax and very narrowly reflexed, under surface reddish-brown and rugose, the part embracing the elytra punctate.

Long. $7\frac{1}{2}$ lines, lat. $4\frac{1}{2}$ lines.

Hab.—Swan River, W. Australia.

74. *HELEUS CONSULARIS*, Pascoe.

Journ. of Ent. II. p. 463.

“Obovate, glabrous, black, shining; prothorax with a toothed carina in the middle, the posterior tooth large, in the form of a compressed triangular spine; scutellum transversely triangular, keeled in the middle; elytra impunctate, the broad strongly reflexed margins faintly punctured, their edges terminated by an erect, narrow border, the raised suture having on each side at a short distance a sharp costa crenated on both sides, and externally near the angle formed by the reflected margin a line of small tubercles which do not however extend to the base; body beneath glabrous, black, shining; legs rugose” (Pascoe).

Length, 11 lines.

Hab.—Western Australia.

I have never seen this species.



75. *HELEUS CASTOR*, Pascoe.

Journ. of Ent. II. p. 464.

“Broadly ovate, brownish, scarcely shining, margins of the prothorax and elytra broad and only slightly reflexed, the edges with an erect narrow border; antennæ nearly linear; prothorax with short, scattered bristly hairs, the perforated portion with an elevated margin, disk with a sharp longitudinal line, posterior angles falcate, overlapping the elytra; scutellum broadly triangular; elytra irregularly punctured, and clothed with numerous scattered minute bristles, costa on each side of the suture terminating at about a third from the apex; body beneath dark brown; legs rugose” (Pascoe).

Length, 9 lines.

Hab.—South Australia.

This is the most nearly circular-shaped species I know. The breadth is very slightly less than the length.

76. *HELEUS FALCATUS*, Pascoe.

Journ. of Ent. II. p. 464.

Ovate, black, thorax obsoletely granulate, strongly carinate in the middle, the anterior angles crossing and terminating in an acute point, the margin moderately recurved. Elytra broad and broadly margined, very glossy, rather faintly and rugosely punctate and sparsely clothed with minute setæ, with the suture strongly carinate, and a costa on each side reaching from the base to one-third from the apex, sharply elevated and rather crenulate on both sides; the margins are smooth and are bordered on the inner side by a row of granules. In all else like *H. Peronii*.

Long. $5\frac{1}{2}$ lines, lat. $3\frac{3}{4}$ lines.

Hab.—South Australia.

77. *HELEUS HOPEI*, Brême.

Mon. Cossyph. I. p. 68, pl. V. fig. 4.

Oval, dull black; head rounded and rugose, clypeus not emarginate, separated from the epicranium by a deep transverse groove; labrum rounded and salient. Antennæ scarcely the length of the thorax, rugose and hairy, the four last joints round. Thorax transverse, narrowed in front, convex, sinuate behind, strongly rugose and carinate, the median line elevated into a carina, the margins not reflexed all round, broad particularly towards the posterior angles which are acute and feebly recurved, the anterior angles touch only and are thin and very pointed. The elytra narrow slightly on the sides towards the apex and terminate in a slight point; they are rugose, with numerous slightly visible costæ, the disk is convex at the base and flattened towards the apex; on each elytron and about the middle of its breadth is a strongly salient costa, longitudinally rounded, which extends from the base to two-thirds of the length, where it is obliterated and approaches the suture, the suture is not sensibly elevated, the margin is as large as that of the thorax at the humeral angles and is almost reduced to a simple reflected border posteriorly on each side. Legs and under surface dull black.

Long. $5\frac{1}{2}$ lines, lat. $3\frac{3}{4}$ lines.

Hab.—New Holland, probably West Australia.

I have never seen this species. It differs considerably from all those described above, and seems to lead off to a rather distinct group to which the two following species belong.

78. *HELEUS SQUAMOSUS*, Pascoe.

Ann. Nat. Hist. Ser. 4, Vol III. p. 286, pl. XII. fig 4.

“Oblong, parallel at the sides, impunctate, rusty-brown, opaque, sparsely covered with fulvous hairs simulating scales; head a little prolonged anteriorly; clypeus rounded; prothorax rather transverse, with a strongly marked carina in the middle, the foliaceous

margins broad and reflexed ; scutellum transversely triangular ; elytra moderately convex, depressed along the sutural region, the suture finely raised, and near it on each side a strongly marked carina, which terminates abruptly at a little distance from the apex, a line of small tubercles towards the foliaceous margins, which are moderately broad, but expanded inwardly near the shoulders ; body beneath and legs opaque rusty-brown clothed with fine scattered hairs" (Pascoe).

Length, 12 lines.

Hab.—Cooper's Creek, Darling River.

79. *HELÆUS DERBYENSIS*, n. sp.

Very like *H. squamosus* but larger, and of the same rusty brown, opaque, squamous appearance. The anterior angles of the thorax come in contact but do not cross, the disk is less convex than in *H. squamosus*, and the carina is less and more uniformly elevated ; the posterior angles are sharp and but lightly recurved. The elytra scarcely differ from those of *H. squamosus*, the suture is not at all carinated, and the sculpture generally and the clothing are perhaps less coarse. The three last joints of the antennæ are shorter than the others but not broader.

Long. 12 lines, lat. 7 lines.

Hab.—Derby, King's Sound, North-west Australia.

80. *HELÆUS HAAGII*, Dohrn.

Stett. Ent. Zeit. 1881, p. 314.

Like *H. Peronii*, but very much smaller ; entirely covered with a thin, short, setiform decumbent pubescence, rugosely punctate, and of a dull reddish-brown colour ; the anterior angles of the thorax falcate and acute, but not meeting in front of the head.

Long. 4 lines, lat $2\frac{3}{4}$ lines.

Hab.—South Australia.

4. ELYTRA TUBERCULATE.

This sub-section includes several species so like one another, and so inadequately described, that it becomes a matter of great difficulty to make them out; fortunately I have in my collection the original of *H. echinatus*, a species described by the Rev. Mr. Hope, from an insect sent him by W. S. Macleay, whose MS. name is affixed to the specimen which I now redescribe.

81. HELEUS ECHINATUS, Hope.

Trans. Ent. Soc. Lond. Vol. V. p. 54, pl. VII. fig. 1.

Oval, black, opaque. Head very minutely rugosely punctate, transverse, depressed in front, no visible clypeal suture, clypeus a little emarginate in front, labrum large. Thorax very minutely and roughly striolate punctate, very minutely pubescent, slightly transverse, the margins thickly raised and reflected on the borders, the anterior angles crossing in front of the head and terminating in a narrow rounded point, leaving a transverse opening for the head, the posterior angles very much curved backwards and acute, the disk moderately convex and even, with a low carina on the median line, interrupted in the middle, and a little elevated at the base. Elytra slightly broader than the thorax at the base, not amplified behind, convex, the margins corrugated and slightly reflexed, broad at the shoulders and narrow at the apex; the disk coarsely punctured in twelve close rows, a row of glossy tubercles on the alternate interstices, three of these larger than the others, one rising on each side of the scutellum and running obliquely to the suture at about one-fourth of the length from the base, and thence along the suture, and consisting until near the apex of elongate nearly continuous tubercles, the third and fifth rows of tubercles are larger and more distant, the second, fourth and sixth rows still more distant and slightly smaller. The under surface and legs are opaque and very minutely granulate, the prosternum is very obsoletely carinate; the antennæ are setose, the four last joints broader a little than the others.

Long. $6\frac{1}{2}$ lines, lat. $4\frac{1}{4}$ lines. *Hab.*—New South Wales.

82. *HELÆUS ECHIDNA*, White.

App. Voy. Grey, p. 464.—Brême, Mon. Cossyph. I. 64, pl. VII. fig. 1.

Of a brilliant black, oblong. Head convex, smooth. Thorax a little sinuate behind, rounded on the sides, slightly convex, smooth with two light depressions on each side behind, the margins broad, raised, wavy and feebly folded on the borders, the anterior angles blunt and crossing, the posterior short but recurved backwards. Elytra oblong, smooth, nitid, rounded towards the apex, the disk convex, with three rows of spines on each elytron, two of them near the suture, the third approaching the margin, the spines of the middle ranges are rather irregularly disposed, and are much stronger than those of the lateral ranges, the margins smooth, as large as those of the thorax, rounded behind, raised and wavy.

Long. $7\frac{1}{2}$ lines, lat. $3\frac{1}{2}$ lines.

Hab.—King George's Sound.

83. *HELÆUS OVATUS*, Guérin.

Voy. de la Coquille, p. 105, pl. V. fig. 7.—Brême, Mon. Cossyph. I. p. 69, pl. V. fig. 2.

Ovate, convex, smooth, brownish-black. Head small, rounded, rugose, the anterior border of the clypeus emarginate, labrum salient and emarginate; antennæ shorter than the thorax, the five terminal joints larger than the others and a little dilated. Thorax transverse, dull, rugose, emarginate at the posterior angles which are very salient; the disk convex, the median line elevated as in *H. peronii*, on each side of that line at the base are two small fossæ; the margins are narrow and rugose, the anterior angles acute and crossing a little. Elytra rounded towards the apex, and slightly pointed, convex, nitid and irregularly punctate, on each side near the scutellum an elevated costa, sharp and narrow, which terminates at the suture at a third of its length; beyond this there is another costa scarcely larger than the first,

but is continued in a series of a sharp erect spine or tubercles, the suture is spinous and between it and the costa is a line of minute tubercles; there are two other series of tubercles outside the second costa; margins very narrow.

Long. $7\frac{1}{2}$ lines, lat. $4\frac{1}{2}$ lines.

Hab.—New Holland.

84. HELÆUS TUBERCULATUS, Brême.

Mon. Cossyph. I. p. 71, pl. VII. fig. 2.

Dull blackish-brown, glabrous, ovate. Antennæ and head as in *H. ovatus*, the latter a little more square and flattened. Thorax smooth, very rounded laterally, transverse and sinuate behind, the disk convex, the median line raised, more strongly posteriorly, the margins broad and rugose, the borders folded above, the anterior angles very acute, touching but not crossing in front, the posterior strongly recurved backwards. Elytra rounded posteriorly and very slightly acuminate at the apex, the humeral angles obtuse, the disk oval, convex, on each side of the suture are two rows of sharp tubercles some of these, particularly near the base, are of elongate form, the row or costa along the suture diverges in front towards the scutellum, of which it takes the direction, the costa of the middle of the elytra forms a narrow line, these costæ are obliterated towards the apex, as well as the tubercles which are irregularly spread over the interstices, the whole surface is coarsely punctate, the margins are smooth and not raised, broad at the humeral angles, narrowing to almost none at the apex.

Long. $6\frac{1}{2}$ lines, lat. $4\frac{3}{4}$ lines.

Hab.—Victoria.

Genus SYMPETES, Pascoe.

Journ. of Ent. II. p. 464.

A genus characterised by Pascoe as being separated from *Helæus* by the anterior angles of the thorax not meeting in front of the head, and from *Saragus* by the mesosternum having no notch for the reception of the prosternal process. Labrum hidden.

85. SYMPETES MACLEAYI, Pascoe.

Journ. of Ent. II. p. 465.

“Broadly and almost elliptically ovate, and very much depressed, dark brown, the margins paler, somewhat shining; clypeus broad, emarginate at the apex, and hiding the lip; prothorax finely punctured, the disk at the base scarcely more than a third of the width; scutellum broadly triangular; elytra with rather small punctures, sharply raised along the suture, each elytron with three indistinct lines, the margins nearly flat; body beneath and legs dull reddish-brown, the margins of the prothorax and elytra finely punctured” (Pascoe).

Length, 12 lines.

Hab.—King George’s Sound, Western Australia.

My specimens of this insect have the median line of the thorax carinated lightly in front, and more elevated towards the base; Mr. Pascoe makes no mention of this, yet as I can scarcely think that there is more than one species of this peculiar flattened form, I fancy it must be an omission on Mr. Pascoe’s part.

86. SYMPETES CONTRACTUS, Hope.

Trans. Ent. Soc. Lond. Vol. V. p. 53, VI. fig. 2.

“Ater, ovatus, postice vix dilatatus, antennis piceis; thorace marginibus elevatis, lineaque media longitudinali elevata. Elytra sub-lente tribus lineis parum distinctis notata, sparsimque punctulata. Corpus infra atro-piceum, abdomine colore piceo inquinato pedibusque concoloribus” (Hope).

Long. $9\frac{1}{2}$ lines, lat. $3\frac{1}{2}$ lines.

Hab.—Swan River.

87. SYMPETES TRICOSTELLUS, White.

Voy. Capt. Grey, App. p. 464.—Brême, Mon. Cossyph. I. p. 53, pl. V. fig. 6.

Brown, glabrous, ovate, dilated posteriorly. Head punctate, slightly transverse, rounded laterally with the borders raised, a

little emarginate anteriorly, the clypeus and epicranium convex, separated by a deep suture. Antennæ of a clear brown, about the length of the thorax, the four terminal joints small but more rounded than the others, particularly the last which is oval and pointed. Thorax flat, scarcely visibly punctate, transverse, sinuate behind, rounded on the sides, and narrowed in front, the median line elevated towards the base, the margins flat, broad and bordered, the anterior angles obtuse, half the length of the head, the posterior slightly salient and curved backwards. Elytra rounded behind, convex, nitid, somewhat sinuate at the base, the disk convex and punctate; on each elytron three very obliterate costæ, placed a little obliquely, suture strongly elevated, margins broad, flat and folded on the borders, equally broad throughout and a little gibbous at the humeral angles; under the body brown, punctate; feet of the same colour, the two penultimate segments of the abdomen bordered with red.

Long. 10 lines, lat $7\frac{1}{4}$ lines.

Hab.—West Australia.

Genus SARAGUS, Erichs.

Archiv für Naturg. 1842, p. 171.—Lac. Gen. Col. Vol. V, p. 348.

Head sunk in the thorax to the insertion of the antennæ, a little narrowed behind and broadly truncate or sinuate in front, the clypeus separated from the front by a suture frequently almost obsolete. Eyes tolerably prolonged on the front. Antennæ shorter than the thorax; their three, four, or five last joints somewhat orbicular, forming a slightly conspicuous mass. Thorax transverse, parabolically rounded on the sides, broadly and deeply emarginate semi-circularly in front, contiguous to the elytra and bisinuate at the base, with the posterior angles salient behind, the foliaceous part broad, flat or concave, and raised on the borders. Elytra oval, more or less convex, their margins of variable breadth, often narrow throughout. Legs somewhat long; the tibiæ finely rough, the

anterior sometimes denticulate on the external edge and with one or two spurs, the four posterior tibiæ with two spurs. Metasternum very short. Mesosternum and prosternal process as in *Heleus*. Body oval, apterous.

This genus includes all the apterous species of the *Heleides* excepting those comprised in the two preceding genera. They seem to be all ground beetles, and inhabit chiefly the dry arid districts of South Australia, Western Australia, and the interior of New South Wales. A variety of different forms and sculpture is to be found included under this genus, some perhaps justifying the formation of new genera. I shall, however, content myself with dividing the numerous species into sections, so as to simplify to the student the identification of those described.

I divide the genus in the first instance into three sections founded on the sculpture of the elytra, viz.: (i.) Those species which have distinctly costate elytra. (ii.) Those with a more or less coarse reticulate sculpture, and (iii.) Those with the elytra not or faintly costate, or punctate or smooth. The first of these sections comprises three distinct types—(1) *Heleus*, like insects of oblong form, broad concave margins to thorax and elytra, and one costa on each elytron. This includes four species—*S. incisus*, Pascoe; *S. convexicollis*, Macl.; *S. Blackburni*, Macl., and *S. Spinoke*, Hope. (2) Insects of the type of *S. levicollis*, Fab.,—convex form and tricostate elytra, the interstices tuberculate; all the species of this type have the apex of the anterior tibiae largely and bluntly produced, and the external terminal spine very large and obtuse; the group will include—*S. Odewahni*, Pascoe; *S. catenulatus*, Macl.; *S. rudis*, Macl.; *S. levicostatus*, Macl.; *S. rugosus*, Boisd. (3) Species of the *S. emarginatus* type. The elytra costate as in the last, but the interstices smooth or only punctate. Species—*S. emarginatus*, Guér.; *S. interruptus*, Brème; *S. marginellus*, Hope; *S. confirmatus*, Pascoe; *S. opacipennis*, Macl.; *S. infelix*, Pascoe. Section ii. Elytra reticulate, includes five species—*S. luridus*, Haag-Rut.; *S. reticulatus*, Haag-Rut.; *S. clathratus*, Macl.; *S. crenulatus*, Macl.; *S. rugosipennis*, Macl. Section iii. like section i. is divisible into three groups. (1)

Those having the elytra striate or faintly costate as—*S. australis*, Boisd. ; *S. limbatus*, Pascoe ; *S. simplex*, Hope ; *S. tursalis*, Hope ; *S. carinatus*, Brême ; *S. asidoides*, Pascoe ; *S. asperipes*, Pascoe ; *S. exulans*, Pascoe ; *S. striatipennis*, Macl. ; *S. geminatus*, Macl. (2) The group of which *S. brunnipes* may be taken as the type. *S. brunnipes*, Brême ; *S. Pascoei*, Macl. ; *S. brunnipennis*, Macl. ; *S. magister*, Pascoe, and (3,) of some smooth rather flat circular shaped species chiefly from Western Australia—*S. Duboulayi*, Pascoe ; *S. laevis*, Macl. ; *S. gayates*, Brême ; *S. orbicularis*, Brême ; *S. rotundatus*, Brême ; *S. subrugosus*, Brême ; *S. unicarinatus*, Brême ; *S. patelliformis*, Pascoe. Other species remain which can scarcely be placed with any of the foregoing groups. *S. ovalis*, Macl., a smooth oblong species of the *S. incisus* type, and *Helcus testudineus*, Hope, which may be a *Saragus*, but has a general resemblance to the genus *Encara*.

SECTION I.

ELYTRA COSTATE.

88. SARAGUS INCISUS, Pascoe.

Ann. Nat. Hist. Ser. 4, Vol. V. p. 101.

“Obovate, dark-brown, opaque ; head and prothorax covered with short minute ridges (except the centre of the latter), and more or less longitudinal or slightly oblique ; eyes not approximate, front rather concave ; prothorax deeply emarginate at the apex, the angles on each side produced, subacute, behind the middle a slightly gibbous lobe angularly emarginate posteriorly ; scutellum broad, rounded behind ; elytra gradually broader behind for about two-thirds of their length, the suture finely raised, each elytron with a stout costa near the suture, abruptly terminating near the commencement of the posterior declivity, the space between the two irregularly but finely punctured, between the costa and the expanded margin three rows of small elevated tubercles ; body beneath and legs black, rather glossy” (Pascoe).

Length, 10 lines.

Hab.—Mudgee, New South Wales.

In my specimens of this insect, the head and thorax are more minutely and densely granulate, and the gibbous elevation on the thorax is large and bi-tuberculate.

89. SARAGUS CONVEXICOLLIS, n. sp.

In form and sculpture very like the preceding species. It differs in being of more elongate form, and of a more nitid black colour. The thorax is less thickly granular and less transverse, the disk very convex with a well-marked median line, and the anterior angles less pointed. The elytra are more parallel-sided, the costa on each side of the suture is continuous almost to the apex, the tubercles on the three outer rows smaller and the interstices more granular than in *S. incisus*, the space between the two costæ punctate.

Long. 10 lines, lat. 5 lines.

Hab.—South Australia.

90. SARAGUS BLACKBURNI, n. sp.

Very like *S. incisus*, but of a rather broader form; the head is deeply impressed between the eyes, the clypeal suture deeply marked. The thorax is like that of *S. incisus*, but the gibbosity not so marked or so largely tuberculated, the anterior angles not so pointed, and the sides even rounded, not sinuate as in *S. incisus*. The elytra are minutely and thinly punctate, the costæ and rows of tubercles as in *S. incisus*, but much smaller and smoother.

Long. 10 lines, lat. $6\frac{1}{2}$ lines.

Hab.—South Australia.

I have named this species after the Rev. T. Blackburn, B.A., whose studies of the Entomological Fauna of South Australia, published in the Proceedings of the Royal Society of that Colony, are most valuable to Australian entomologists.

91. SARAGUS SPINOLÆ, Hope.

Helaeus Spinolæ, Hope, Trans. Ent. Soc. Lond. Vol. V. 1848, p. 53, pl. VI. fig. 3.

Black, the thorax and margins of the elytra blackish-brown, legs piceous. Ovate, head depressed, subrugose, the anterior angles of the thorax not meeting, the elytra furnished in the middle with long, crisp, black hair. Body beneath piceous, of the same colour as the legs. Long. $9\frac{1}{2}$ lines, lat. $6\frac{1}{2}$ lines.

Hab.—Swan River.

To this description of Hope's, Westwood has added in a note with reference to its affinity to *H. perforatus*, Kirby—"It is of a much more regularly oval form, with each extremity somewhat acute, the anterior angles of the prothorax are subtruncate in front of the eyes, and do not overlap each other, leaving an open space of nearly the breadth of the head. The disk of the prothorax has two impressed spots, and wants the central posterior tubercle which exists in *H. perforatus*."

I have never seen this insect, but from the plate and description I have no hesitation in placing it in this genus, and in the *incisus* group, the lines of crisp hair taking the place of the costæ.

92. SARAGUS LAEVICOLLIS, Fabr.

Silpha laevicollis, Fabr. Ent. Syst. 1, 250, 8.—Syst. El. 1, p. 338, 8.—Ol. Ins. 2, 11, 12, tab. II. fig. 15; *Cilibe laevicollis*, De Brême, Mon. des Cossyph. I. p. 44, pl. III. fig. 1.; *Saragus laevicollis* Erichs. Wieg. Archiv 1842, I. p. 172, pl. 4, f. 7; Hope, Trans. Ent. Soc. Lond. Vol. V. 1848, p. 56, pl. VII. fig. 5.

Oval, black, opaque; head rounded, salient, convex and rugose, border of the epistome and epicranium a little raised. Antennae short, of a reddish brown; the last five joints broader and rounder than the others. Thorax transverse, sinuate posteriorly and rounded on the sides; the disk convex and rugose,

the margins broad and transversely wrinkled, anterior angles rounded, not much advanced, the posterior slightly recurved. Elytra very convex, oval, punctate, a little dilated towards the middle, the humeral angles obtuse; on each elytron three sharp costæ, rising from the base and not reaching the apex; these costæ are irregularly interrupted behind, the interstices have each a row of distant tubercles of unequal size, the margins are narrow. The under surface is of a subnitid brown and punctate.

Long, 7 lines, lat. 5 lines.

Hab.—Tasmania, Victoria, and South Australia.

This and some of the following species seem to differ much from the rest of the genus in having a very strong blunt tooth rising from the outer apex of the anterior tibiæ.

93. SARAGUS ODEWAHNII, Pascoe.

Journ. of Ent. II. p. 467.

“Shortly ovate, blackish-brown, opaque; clypeus slightly produced, broadly emarginate at the apex, separated from the head by an indistinct semi-circular line; head rugosely punctured; prothorax very closely and minutely punctured, the intervals having a granulous appearance, the apex rather broadly emarginate, the margins broad and pale brownish; elytra considerably broader at the middle and posteriorly, tricostate, the inner costa sharply defined, but suddenly ceasing before the apex, the two outer costæ broken up into short lines or points, the intervals with a slight tomentose pubescence, out of which rise a number of minute granules; body beneath dark brown, shining; legs paler; tibiæ slightly scabrous” (Pascoe).

Length, 5 lines.

Hab.—South Australia (Gawler).

94. SARAGUS CATENULATUS, n. sp.

Very like *S. levicollis*, but differs in being larger, in having the head less raised at the sides and front, in having the thorax very

minutely granular, and not corrugated on the margins, in having the costæ of the elytra very narrow and rather wavy, in having a row of small distant elongate tubercles in the interstices which are obsolete rugose and minutely granulate.

Long. 7 lines, lat. $4\frac{1}{2}$ lines.

Hab.—Murrumbidgee.

95. SARAGUS RUDIS, n. sp.

Broader and flatter than the last, black, opaque, the margins reddish. Head minutely granulate, rather depressed, emarginate. Thorax minutely granular, transversely convex near the base, the margins broad and corrugate. Elytra strongly tricostate, the costæ somewhat crenulate and continuous almost to the apex, the interstices coarsely and rugosely punctate and granulate, the margins broad and corrugate. Under surface nitid, the spur on the fore tibiæ more long and acute than in the preceding species.

Long. 8 lines, lat. 5 lines.

Hab.—Monaro, Mudgee.

96. SARAGUS LEVICOSTATUS, n. sp.

Very opaque and convex, much smaller than *S. levicollis*, from which it differs chiefly in the sculpture of the elytra, in which the costæ are very fine, and composed of single rows of more or less distant minute tubercles, the alternate rows most distant, the margins are narrow; the tibiæ much serrated on the outside, the anterior tibiæ most so, and the terminal spur very large.

Long. $4\frac{1}{4}$ lines, lat. 3 lines.

Hab.—South Australia.

97. SARAGUS RUGOSUS, Boisd.

Cilibe rugosa, Boisd. Voy. de l'Astrol. Ent. p. 264.

Black, the thorax very finely rugose, elytra bicostate in front, with series of oblong rough, elevated points.

Hab.—New Holland.

This is all the description given by Boisduval. It seems to be of the *S. levicollis* type.

98. SARAGUS EMARGINATUS, Guér.

Cilibe emarginatus, Guér. Voy. de l'Coquille, p. 105; *C. cassidoides*, Boisd. Voy. de l'Astrol. p. 265; *C. emarginatus*, Brême, Mon. Cossyph. I. p. 47, pl. III. fig. 5.

Of a dull black, head flat, transverse and rugose, slightly emarginate in front, the borders slightly raised. Antennæ short, testaceous, the terminal joint thick. Thorax transverse, rounded, feebly granulate, narrow in front, sinuate behind, convex; margin broad, flat; anterior angles obtuse, not reaching half the length of the head, the posterior a little recurved. Elytra feebly sinuate at the base, oval, a little widened in the middle, terminating in a very obtuse point; they are covered with large impressed points, and have each three elevated costæ, of which the exterior is least marked, the suture is raised and smooth, the margins narrow, raised on the border and wrinkled; beneath black, slightly punctate.

Long. 7 lines, lat. $4\frac{1}{2}$ lines.

Hab.—Victoria.

99. SARAGUS INTERRUPTUS, Brême.

Cilibe interruptus, Brême, Mon. Cossyph. I. p. 46, pl. IV. fig. 7.

Of a blackish-brown colour. Head large, convex, punctate, salient, a little emarginate in front and laterally, labrum salient. Thorax transverse, convex, rounded, narrow in front and sinuate on the posterior border, granulate, margins broad, flat, the borders a little folded above, the anterior angles rounded, reaching half the length of the head, the posterior very salient and recurved backwards. Elytra very convex, finely granulate and a little pointed at the apex, the humeral angles obtuse. On each elytron are three costæ, that nearest the suture interrupted behind the middle, the others formed of series of elongate very small tubercles, suture scarcely salient, margin very narrow.

Long. 5 lines, lat. 3 lines.

Hab.—Australia.

100. SARAGUS MARGINELLUS, Hope.

Heleus marginellus, Hope, Trans. Ent. Soc. Lond. Vol. V. 1848, p. 55, pl. VII. fig. 4.

"Ater, antennis concoloribus; thorace convexo, crebrissime sub-tuberculato, marginibusque lateralibus rubro-piceis. Elytra ternis lineis majoribus rugoso-elevatis conspicua, granulisque crebris in interstitiis satis apparentibus, margineque externo elytrorum rubro-piceo. Corpus infranigrum, pedibus piceis" (Hope),

Long. 8 lines, lat. 5 lines.

Hab.—Norfolk Sound.

101. SARAGUS CONFIRMATUS, Pascoe.

Ann. Nat. Hist. Ser. 4, Vol. V. p. 102.

"Rather broadly obovate, black, slightly opaque; head finely punctured, broad in front, the clypeus not emarginate; prothorax very minutely punctured, the disk slightly convex, distinctly separated from the margins, which are unicolorous and not thickened at the edges; scutellum broadly transverse; elytra more convex posteriorly, impunctate, but closely covered with minute granules, each with four elevated lines gradually disappearing posteriorly, the first and third strongly marked, the fourth nearly obsolete, the suture raised, the margins not dilated, except very slightly at the anterior angles, and forming a narrow elevated edge; body beneath and femora brownish-black, finely punctured; tibiæ minutely spinulous; tarsi slightly ferruginous; antennæ blackish, the last joint nearly circular, ferruginous" (Pascoe).

Length, 6 lines.

Hab.—West Australia.

102. SARAGUS OPACIPENNIS, n. sp.

Broadly ovate, black, sub-opaque. Head very minutely punctate, the lateral angles round and salient. Thorax sub-nitid, very minutely punctate, the disk a little convex, with the median line lightly marked and almost imperceptibly and broadly depressed near the base, and the margins broad and nearly flat, the anterior

angles are advanced and the posterior recurved. The scutellum is transversely triangular and smooth. The elytra are rather convex, with the suture and four lines on the disk costate, these costæ are raised and smooth, the sutural one continuous to the apex, the others for two-thirds of the length, the first from the suture the largest, the interstices are broad, flat, opaque and very obsolete punctate; the margins are moderately broad. The under surface is striolate, punctate and sub-nitid.

Long. 6 lines, lat. 4 lines.

Hab.—Derby, North West Australia.

103. SARAGUS INFELIX, Pascoe.

Journ. Ent. Vol. II. p. 466.

“Shortly ovate, blackish brown, opaque; clypeus very transverse, narrower anteriorly and emarginate, separated from the head by a deep semi-circular line; head finely but rugosely punctured; prothorax closely covered with small oblong punctures, the margins broad and sub-granulous, the apex rather broadly emarginate; elytra tricostate, the costæ moderately elevated, dying out towards the apex, the intervals irregularly punctured, the margins narrow but very distinct; body beneath and femora chestnut-brown; tibiæ scabrous, the outer edge of the anterior tuberculate; tarsi and antennæ pale ferruginous” (Pascoe).

Length, 6 lines. *Hab.*—Tasmania.

The species is unknown to me. It is, according to Pascoe, smaller and less convex than *S. levicollis*, and is without the distant rows of tubercles between the costæ of the elytra.

SECTION II.

ELYTRA RETICULATE.

104. SARAGUS LURIDUS, Haag-Rut.

Journ. Mus. Godef. Heft 14, p. 116, taf. VII. fig. 2.

“Oblongo-ovalis, ater, opacus, indumento griseo obtectus, clypeo sparsim punctato, fronte rugulosa; thorace lateribus explanatis antice valde coarctato, angulis posticis acutis, productis, supra convexo,

antescutellum impresso, sat dense aciculato-punctato, punctis pilum minutissimum brunneum gerentibus; elytris thorace non latioribus, lateribus parallelis, postice fortiter declivibus; humeris oblique truncatis, angulo fere spinoso; supra costis tribus undulatis, interstitiis subtilissime granulatis; granulis pilum ut in thorace gerentibus; processu prosternali valde producto, acuminato, grosse punctato" (Haag-Rut).

Long. 12-17 mm., lat. $7\frac{1}{2}$ -10 mm.

Hab.—Queensland, Peak Downs.

105 SARAGUS RETICULATUS, Haag-Rut.

Journ. Mus. Godef. Heft 14, p. 116, Note.

"Ovalis, niger, opacus; capite thoraceque ut in *lurido*; elytris latitudine vix longioribus, lateribus explanatis, supra minus convexis, carinis tribus parum elevatis undulatis, rugulis transversis inter se connexis; interstitiis indistincte rugolosis, punctatis" (Haag-Rut).

Long. 13 mm., lat. 9 mm.

Hab.—Endeavour River.

106. SARAGUS CLATHRATUS, n. sp.

Of the form and size of *S. luridus*. Head and thorax similarly but more thinly punctate in the middle than in that species. Elytra with three strong tortuous costæ on each, with occasional incomplete transverse connections, the interstices very rugose and coarsely and thinly punctured. In all else like *S. luridus*.

Long. 6 lines, lat. $3\frac{1}{2}$ lines.

Hab.—Fitzroy Downs.

107. SARAGUS CRENULATUS, n. sp.

Like the preceding three species. The thorax more densely and minutely vermiculate-punctate; the costæ on the elytra thinner than in the last species and less tortuous, the interstices with several very irregular rows of very minute granules; the costæ are nitid, the interstices densely covered with a greyish indument.

Long. 5-6 lines, lat. $3\frac{1}{2}$ lines.

Hab.—Port Denison.

108. SARAGUS RUGOSIPENNIS, n. sp.

This species has perhaps more claim to be placed with the *S. emarginatus* group than here. It is of an almost nitid black colour. The head is flat, not densely punctate, and a little emarginate in front; the antennæ are more elongate than in the preceding species; the thorax is densely and finely punctate, the margins broad, and raised and thickly folded on the edges. The elytra are moderately convex, and slightly amplified about the middle, the suture costate, three irregular costæ on each elytron more or less connected with very irregular transverse elevations and covered with large rugose punctures, the margins rather broad at the shoulders and smooth, behind narrower and corrugated. Beneath black, nitid, striolate.

Long. 6 lines, lat $3\frac{1}{2}$ lines.

Hab.—Monaro, New South Wales.

SECTION III.

ELYTRA LINEATE-PUNCTATE, OR PUNCTATE, OR SMOOTH.

109. SARAGUS AUSTRALIS, Boisd.

Cilibe australis, Boisd. Voy. de l'Astrol. p. 263.—Brème, Mon. Cossyph. p. 43, pl. IV. fig. 2.

Of a blackish brown colour, glabrous, ovate. Head roundish and salient, finely punctate, a little emarginate in front, labrum salient, forehead concave. Thorax convex, transverse, smooth, rounded on the sides and strongly sinuate behind, the margins broad, scarcely elevated, with rounded borders, the anterior a little more than half the length of the head, the posterior very salient and recurved. Elytra convex, a little sinuate at the base, slightly dilated at a third of their length, and rounded towards the apex; on each elytron three distinct but smooth costæ, the interstices punctate, margins narrow.

Long. 8 lines, lat. 5 lines.

Hab.—New South Wales, Victoria.

The sculpturation of the elytra is so smooth, that I place this species, perhaps incorrectly, in this section.

110. SARAGUS LIMBATUS, Pascoe.

Ann. Nat. Hist. Ser. 4, Vol. III. p. 287.

“Broadly oval, moderately convex, brownish-black, scarcely nitid; head and prothorax finely punctured, the latter slightly convex, the basal foveæ nearly obsolete, the anterior angles rounded, posterior produced and recurved, foliaceous margins moderately broad, a little reflexed, and edged with a thickened border; scutellum transversely triangular. Elytra not broader than the prothorax, finely seriate-punctate, the intermediate spaces between the rows raised, three or four on each side the suture the most so, those towards the sides gradually disappearing, foliaceous margins narrowing gradually posteriorly, transversely corrugated; body beneath and legs dark chestnut-brown, a little glossy, the abdominal segments longitudinally corrugated; antennæ ferruginous brown” (Pascoe).

Length, 7 lines.

Hab.—Melbourne, Gawler.

111. SARAGUS SIMPLEX, Hope.

Helæus simplex, Hope, Trans. Ent. Soc. Vol. V. p. 55, pl. VII. fig. 2.

“*Silphaeiformis*, ater, capite subdepresso. Thorax convexus, marginibus elevatis. Elytra lineis elevatis haud valde conspicuis; per totum discum puncta sub-lente confertissime apparent. Corpus infra nigrum, nitidum, femoribus tibiisque concoloribus tarsisque flavo-spongiosis” (Hope).

Long. 9 lines, lat. $4\frac{1}{2}$ lines.

Hab.—West and South Australia.

112. SARAGUS TARSALIS, Hope.

Helæus tarsalis, Hope, Trans. Ent. Soc. Vol. V. p. 55, pl. VII. fig. 3.

“Phosphugaeformis, ater, antennis sub-pilosis et piceis. Thorax convexus, lateribus externis margine elevato conspicuis. Elytra nigra, lineis elevatis notata, interstitiis valde punctulatis. Corpus infra nigrum tarsis pedum flavo-spongiosis” (Hope).

Long. 6 lines, lat $3\frac{3}{4}$ lines.

Hab.—Swan River.

113. SARAGUS CARINATUS, Brême.

Cilibe carinatus, Brême, Mon. Cossyph. I. p. 41, pl. III. fig. 2.

Brown, ovate, glabrous. Head punctate, strongly cut in and narrowed at the anterior angles, labrum salient, narrow, clypeus convex, anterior angles of the epicranium rounded, salient and a little elevated; forehead convex. Thorax finely punctate, transverse, rounded on the sides, narrowed in front and strongly sinuate behind; the margins broad and raised, finely punctate, with folded border; the anterior angles reaching those of the epicranium, the posterior salient and recurved. Elytra oval, pointed behind, sinuate in front, convex and raised on the suture behind, a small oblique fossette, on each side of the scutellum, a number of crowded series of small punctures with some of the interstices slightly raised, the margins large at the base.

Long. $7\frac{1}{2}$ lines, lat. $4\frac{1}{4}$ lines.

Hab.—South Australia.

114. SARAGUS ASIDOIDES, Pascoe.

Journ. of Ent. Vol. II. p. 465.

“Elliptic-ovate, black, opaque; clypeus slightly produced and truncate in front; head finely punctured; prothorax minutely and very closely punctured, rather narrowly emarginate at the apex, the disk flattish and passing gradually into the margin on each

side, shining; elytra flattish at the base, more convex posteriorly, with small punctures in slightly irregular lines, the margins very distinct at the shoulders, but gradually narrowing to the apex, where they nearly disappear; body beneath and legs black, slightly nitid; the latter and antennæ with a thin ferruginous pubescence" (Pascoe.)

Length, 7 lines.

Hab.—South Australia.

Mr. Pascoe seems to have fancied that this species might be identical with *S. simplex*, Hope; it is however a much smoother insect, and more resembles *S. carinatus*, Brême.

115. SARAGUS ASPERIPES, Pascoe.

Trans. Ent. Soc. London, Ser. 4, Vol. V. p. 101.

"Rather shortly obovate, brownish-black, opaque; clypeus slightly emarginate; head and prothorax finely but not closely punctured, the latter with the disk slightly convex, distinctly separated from the margins, and of a paler brown, raised and thickened at the edges; scutellum broadly transverse; elytra more convex posteriorly, finely punctured in slightly irregular lines, every fourth interval between the lines slightly elevated; the margins very narrow and gradually obliterated posteriorly, not marked with transverse folds; body beneath and legs brown, slightly nitid; tibiæ covered with small hispid tubercles; tarsi yellowish-ferruginous; antennæ with the last joint nearly circular" (Pascoe).

Length, 5-6 lines.

Hab.—Port Lincoln, South Australia.

116. SARAGUS EXULANS, Pascoe.

Journ. of Ent. Vol. II. p. 466.

"Oblong-ovate, convex, dark reddish brown, sub-nitid; clypeus sloping at the sides, the apex emarginate; head finely but rugosely punctured; prothorax closely and finely punctured; the punctures

here and there confluent, the apex broadly emarginate, the lateral margins nearly confounded with the disk; elytra closely lineate-punctate, the margins very narrow, and almost disappearing posteriorly; body beneath and femora glossy chestnut-brown; tibiæ, tarsi, and antennæ pale ferruginous, finely pubescent" (Pascoe).

Length, $5\frac{1}{2}$ lines.

Hab.—Lord Howe's Island.

117. *SARAGUS STRIATIPENNIS*, n. sp.

Ovate, black, sub-nitid. Head almost smooth, clypeus very slightly emarginate. Thorax smooth, convex on the disk, deeply emarginate in front, sinuate behind, with the margins broad and turned up and thickened on the edge. Elytra slightly convex, and scarcely rounded on the side, covered with close rows of coarse irregular rather shallow punctures, the interstices 4-8-12 slightly costate, and 2-6 and 10 just traceable, the margins are rather broad and corrugated; under surface black, nitid and punctate; the terminal spur of the fore tibiæ short and conical, the second and third joints of anterior tarsi broad and depressed, the fourth very small.

Long. $6\frac{1}{2}$ lines, lat. 4 lines.

Hab.—Monaro, New South Wales.

118. *SARAGUS GEMINATUS*, n. sp.

Very like the preceding species, but of a more opaque black. The head is more prominently angled in front of the eyes, and the clypeus is rather more emarginate and deflexed, the thorax is less sinuate behind and rather more widely emarginate in front with the median line lightly marked. The elytra are smooth, with 17 rows of minute punctures on each elytron, with a smooth very slightly raised line between every two rows of punctures; the margins are rather broad and scarcely if at all corrugated. The legs are as in *S. striatipennis*.

Long. 7 lines, lat. $4\frac{1}{4}$ lines.

Hab.—Upper Hunter.

119. SARAGUS BRUNNIPES, Brême.

Cilibe brunneipes, Boisd.—Brême, Mon. Cossyph. I. p. 37, pl. III. fig. 4.

Brown, nitid, ovate, glabrous. Head transversal, strongly punctate, labrum salient, clypeus convex and a little emarginate in front, epicranium convex, maxillary palpi testaceous; antennæ short, the last joint terminating in a point. Thorax transverse, rounded laterally, finely punctate, sinuate behind, the disk convex, nitid, the margins light brown, flat, slightly bordered at the anterior angles which are half the length of the head, the posterior slightly pointed backwards. Elytra very convex, nitid, with many series of minute punctures, the interstices very feebly raised, the margins narrow, almost none at the apex. Body beneath reddish-brown, nitid, the terminal spur of the anterior tibiæ very large.

Long. $5\frac{1}{2}$ lines, lat. $3\frac{1}{2}$ lines.

Hab.—Swan River.

120. SARAGUS PASCOEI, n. sp.

Brownish or piceous black, nitid, round, very convex. Head small, thinly and minutely punctate; the clypeus with reflexed border. Thorax more than three times wider than long, entirely smooth, the anterior angles much rounded and reaching the middle of the head, the posterior angles rounded, the base little sinuate, the margins broad, smooth and nearly flat. Elytra perfectly smooth, with numerous irregular rows of minute punctures; the margins smooth, broad at the shoulders, narrow towards the apex. Beneath very nitid; terminal spur of the anterior tibiæ very strong and acute, the tarsi densely clothed with golden pubescence.

Long. $8\frac{1}{2}$ lines, lat. 7 lines.

Hab.—Port Augusta, South Australia.

121. SARAGUS BRUNNIPENNIS, n. sp.

Ovate, piceous, nitid, moderately convex. Head finely punctate, clypeus a little emarginate. Thorax transverse, deeply emarginate in front, lightly sinuate behind, the disk very minutely punctate, the margins rather broad and rugosely punctate. Elytra with numerous close rows of well-marked rather irregular punctures, the interstices not raised, the margins smooth, narrow and reflexed on the borders. Beneath very nitid.

Long. $4\frac{1}{2}$ lines, lat $2\frac{1}{2}$ lines.

Hab.—King George's Sound.

122. SARAGUS MAGISTER, Pascoe.

Journ. of Ent. Vol. II. p. 465.

“Elliptic-ovate, black and shining, very smooth and impunctate; clypeus transverse, gradually rounded from the antennary orbits; prothorax rather narrowly emarginate at the apex, the disk moderately convex, the margin about one-sixth of the breadth of the disk at its widest part; elytra convex, slightly raised into a line posteriorly at the suture, the margins narrower than those of the prothorax; body beneath glossy-black, the abdomen finely corrugated; femora highly polished; tibiæ and tarsi with fulvous hairs, the latter and the antennæ ferruginous” (Pascoe).

Long. 9 lines.

Hab.—Queensland.

123. SARAGUS DUBOULAYI, Pascoe.

Journ. of Ent. Vol. II. p. 466.

“Nearly round, brownish-black, opaque, covered with a very short brownish pubescence; clypeus very broad, truncate or very slightly emarginate, with a deep groove in the middle behind at its junction with the head; prothorax nearly impunctate, narrowly and deeply emarginate at the apex, the disk scarcely convex, less

than half the breadth at the base, and separated from the margins by a strongly marked curved impression; elytra with numerous small punctures, the disk slightly concave, the margin very distinct, gradually narrowing posteriorly; body beneath like the upper part; legs and antennæ pale reddish-brown, with a short greyish pile" (Pascoe).

Length, 5 lines.

Hab.—Champion Bay.

124. SARAGUS LEVIS, n. sp.

Broadly ovate, sub-depressed, black, sub-nitid, very smooth. Head broadly rounded and very slightly reflected in front, puncturation if any extremely minute. Thorax smooth, the disk a little convex, the emargination in front deep and narrow, the posterior angles acutely recurved. Elytra not visibly punctate, slightly convex, the margins as broad at the humeral angles as those of the thorax, flat and thickened on the edge, the humeral angles broadly rounded. The terminal spur of the anterior tibiæ acute but not large, the tarsi are clothed beneath with golden hair, the three first joints enlarged.

Long. 8 lines, lat. 5 lines.

Hab.—Interior New South Wales.

125. SARAGUS GAGATES, Brême.

Cilibe gagates, Brême, Mon. Cossyph. I. p. 52, pl. IV. fig. 1.

Ovate, deep black, nitid. Head transverse, a little emarginate in front, and raised on the borders; clypeus transversely wrinkled; epicranium convex; antennæ short, the terminal joints slightly dilated and testaceous. Thorax smooth, transverse, narrowed in front, nitid, the median line elevated into a carina, margins broad, scarcely granulose, flat, the edge folded upwards, the anterior angles extending beyond the half of the head, the posterior a little recurved. Elytra somewhat sinuate at the base, convex,

rather rounded behind, nitid, somewhat punctate towards the apex; suture carinated, humeral angles obtuse, margins smooth, dilated, equally broad throughout and convex at the humeral angles. Beneath blackish-brown and less nitid. Abdomen wrinkled.

Long. 9 lines, lat. $6\frac{1}{2}$ lines.

Hab.—West Australia.

126. SARAGUS ORBICULARIS, Brême.

Cilibe orbicularis, Brême, Mon. Cossyph. I. p. 51, pl. IV. fig. 3.

Brownish-black, round. Head dilated in front, almost as broad as long, punctate and feebly emarginate, labrum salient and emarginate; epicranium separated from the clypeus by a transverse ridge, antennæ as in *S. rotundatus*. Thorax transverse, rounded, sinuate behind, feebly rugose on the convex part, which is longitudinally carinated, disk broad, very rugose, flat and folded on the edge, anterior angles obtuse, reaching half the length of the head, posterior angles salient. Elytra rugose, very convex, rounded, a little dilated behind, and terminating in a slight point; the humeral angles obtuse, the margins rather broad, rugose, flat, foliated on the upper edge.

Long. $9\frac{1}{2}$ lines, lat. 8 lines.

Hab.—West Australia (?).

127. SARAGUS PATELLIFORMIS, Pascoe.

Ann. Nat. Hist. Ser. 4, Vol. V. p. 100.

“Nearly round, depressed, blackish-brown, somewhat shining, and nearly glabrous; head small, finely punctured, the intervals of the punctures granuliform; prothorax finely punctured, the disk narrow, with a well-marked central impression, each of the dilated margins as broad as the disk; scutellum very transversely triangular; elytra rather finely but irregularly punctured, indistinctly ribbed, the suture raised into a finely marked narrow carina; body beneath dull black, the margins of the elytra glossy; legs slightly hairy” (Pascoe).

Long. 4-5 lines.

Hab.—West Australia.

128. SARAGUS ROTUNDATUS, Brême.

Cilibe rotundatus, Brême, Mon. Cossyph. I. p. 50, pl. IV. fig. 4.

Obscure-brown, glabrous, sub-nitid, round. Head sub-punctate, angles of the clypeus dilated on each side, the epicranium raised and separated from the clypeus by a somewhat circular raised suture, the forehead hollowed between the eyes; antennæ short, brown, the eighth and ninth joints round but not larger than the others, the eleventh slender and oval. Thorax strongly transverse, sub-punctate, rounded in front, slightly sinuate behind, disk depressed with two fossettes on each side of the median line, which form towards the base a very small raised spine; margins very broad, flat, strongly raised and folded on the border; the anterior angles reaching the extremity of the head, the posterior prolonged and recurved. Elytra sinuate at the base, convex, finely punctate, suture carinate, margins very dilated, flat, a little swollen at the humeral angles, all of the same width, beneath brown, punctate and nitid.

Long. 8 lines, lat. 7 lines.

Hab.—Swan River.

The following species do not answer exactly to any of the preceding sections.

129. SARAGUS SUBRUGOSUS, Brême.

Cilibe subrugosus, Brême, Mon. Cossyph. I. p. 49, pl. IV. fig. 5.

Brown, broadly ovate, very rugose; head rather square, rounded in front, scarcely punctate, antennæ short, brown, the basal joints thickened; thorax rounded laterally, narrowed in front, transverse, sinuate behind and rugose, depressed above on each side of the median line, which is slightly raised, margins broad, flat, the anterior angles attaining two-thirds the length of the head, very acute and salient, the posterior ones recurved. Elytra rugose, very convex, rounded laterally, pointed behind, with numerous lines slightly visible, the suture carinate, margins broad, a little swollen at the humeral angles.

Long. $6\frac{3}{4}$ lines, lat. 5 lines,

Hab.—Western Australia (?).

130. SARAGUS UNICARINATUS, Boisd.

Cilibe unicarinatus, Boisd. Voy. Astrol. p. 265.—Brême, Mon. Cossyph. I. p 48, pl. IV. fig. 6.

Ovate, brown, glabrous, head rounded in front, feebly emarginate and punctate, epicranium concave. Thorax flat, transverse, lightly carinate, finely granulate, rounded on the sides and narrowed in front, margins broad, flat, anterior angles salient and sharp, reaching beyond the middle of the head, the posterior angles recurved. Elytra slightly dilated in the middle; pointed at the apex, very convex, punctate with numerous scarcely visible raised lines, suture strongly carinate, margins flat, broad at the base, narrower behind; beneath brown, nitid and strongly punctate.

Long. 6 lines, lat. $4\frac{1}{2}$ lines.

Hab.—Kangaroo Island.

131. SARAGUS OVALIS, Macleay.

Trans. Ent. Soc. N. S. Wales, Vol. II. p. 283.

“Oblong-ovate, black, opaque. Head widened and obliquely angled before the eyes, and broadly rounded and almost truncate in front. Thorax very deeply emarginate in front, deeply bi-emarginate at the base, and very slightly emarginate at the centre of the basal lobe, with the lateral margins very broad, reflexed, and of a dull red colour. Scutellum transversely triangular. Elytra of the width of the thorax at the base and of a dull chocolate colour, with the lateral margins reflexed as in the thorax; broad at the humeral angles, and considerably narrowed towards the apex, and with the disk covered with rows of very small obliterate punctures. Under surface of body sub-nitid. Tarsi ciliated with golden yellow hair” (Macleay).

Length, 9 lines.

Hab.—Gayndah.

132. SARAGUS TESTUDINEUS, Hope.

Helæus testudineus, Hope, Trans. Ent. Soc. Lond. Vol. V. p 53, pl. VI. fig. 4.

“Lato-ovalis, cænicolor, squalidus, capite depresso, angulis anticis thoracis haud complicatis. Elytra sutura elevata, medio discicrebris elevatis lineis satis notato, margine omni lato elytrorum undulato. Corpus infra concolor” (Hope).

Long. $8\frac{3}{4}$ lines, lat. $7\frac{3}{4}$ lines.

Hab.—Port Essington.

This is certainly not a *Helæus*, and I rather doubt its right to be placed in *Saragus*.

The only other recorded species of this genus I know of, is *Saragus marginatus*, Sol., (Studi Ent., p. 356) and of that I have never seen any description.